

TECHNICAL REVIEW DOCUMENT
For
RENEWAL OF OPERATING PERMIT 03OPMO258

Waste Management – Montrose County Landfill
Montrose County
Source ID 0850950

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I. Purpose

This document establishes the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed Operating Permit for the Montrose County Landfill. The previous Operating Permit for this facility was issued on April 1, 2005, was last revised on February 1, 2009 and expired on April 1, 2010. The Title V application submitted on April 2, 2009 was not timely and complete, therefore the application shield was not granted for this facility. A Compliance Order on Consent (Case No. 2010-069), signed January 5, 2011, was agreed to by both parties provided basis for continued monitoring, reporting, and compliance with the original operating permit.

This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted on April 2, 2009 and August 3, 2010, previous inspection reports and various email correspondence. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

The Montrose County Landfill is a municipal solid waste landfill and falls under the Standard Industrial Classification 4953. Landfill gas is generated from the decomposition of organic materials found in landfills. Landfill gas is primarily composed of methane and carbon dioxide. Volatile organic compounds (VOC) and hazardous air pollutants (HAP) are present in landfill gas in trace amounts. These landfill gases

escape from the landfill and are emitted into the air. Fugitive particulate emissions are generated from various activities at the landfill, including, excavation activities, soil cover handling and storage, and truck traffic on haul roads.

This facility is located at 67999 Landfill Road, Montrose, Montrose County. The area in which the landfill operates is designated as attainment for all criteria pollutants. There are no affected states within 50 miles of this facility. The following Federal Class I designated areas are within 100 kilometers of the landfill: West Elk Wilderness, Black Canyon of the Gunnison National Park, Maroon Bells-Snowmass Wilderness, La Garita Wilderness, Weminuche Wilderness

Based on the information provided by the applicant, the facility is categorized as a minor stationary source for PSD applicability purposes (no single criteria pollutant emissions with a Potential-to-Emit greater than 250 TPY) as of the issue date of this permit. The source therefore is not subject to the PSD review requirements of 40 CFR 52.21 (Colorado Regulation No. 3, Part D, Section IV). Future modifications to this facility may result in an exceedance of the major source threshold. Once that threshold is exceeded, future modifications at this facility resulting in a significant net emissions increase for any pollutant as listed in Regulation No. 3, Part D, Section II.A.44 or a modification which is major by itself may result in the application of the PSD review requirements.

Landfill gas emissions are calculated using EPA's LandGEM. The potential to emit is calculated using the Division approved NMOC concentration value of 956 ppmv as hexane, methane generation capacity of 100 m³/Mg and a methane generation rate of 0.02/yr for arid areas. Particulate emissions from material handling are calculated using methodology from AP-42. Emissions (in tons/yr) at the facility are as follows:

Pollutant	PTE (tons/yr)	Actual ¹ (tons/yr)
PM	68.61	19.55
PM ₁₀	21.19	4.68
VOC	16.62	0.91
CO	2.03	0.45

¹From APEN submitted August 3, 2010. APEN used an NMOC concentration of 238.43 ppmv as hexane based on the most recent site specific Tier II evaluation.

Note that the facility is not major for Title V purposes based on its level of emissions. The facility is subject to NSPS Subpart WWW which requires all municipal solid waste landfills with a design capacity greater than 2.5 million megagrams or 2.5 million cubic meters to obtain an operating permit.

Applicable Requirements

Greenhouse Gases

The potential to emit greenhouse gases at this facility is less than 100,000 TPY CO₂e. Future modifications at this facility that exceed 100,000 TPY CO₂e may be subject to

regulation. On July 20, 2011, a final rule regarding biogenic CO₂ emission was published in the Federal Register. This final action defers, for a period of three years, the application of the Prevention of Significant Deterioration (PSD) and Title V permitting requirements to carbon dioxide (CO₂) emissions from bioenergy and other biogenic stationary sources (biogenic CO₂). As it relates to this facility, biogenic CO₂ includes all CO₂ generated from the biological decomposition of waste in landfills and CO₂ emissions from the combustion of biogas collected from the biological decomposition of waste in landfills. Note that the emission of biogenic methane is still a contributing factor in calculating greenhouse gas emissions from the facility.

NSPS Subpart WWW

This facility is subject to the provisions of 40 CFR Part 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills. The design capacity of the landfill is 8,069,850 cubic yards for an estimated capacity of 3,333,904 Mg. A Tier 2 test was conducted in March, 2009 and determined the site specific NMOC concentration to be 238.43 ppmv as hexane. The resulting NMOC emission rates calculated since the last Tier 2 have been below 3 Mg/year. Based on this information, the facility is subject to the NSPS requirement to obtain a Title V permit and has not yet triggered the requirement to install a gas collection and control system. The facility is required to perform Tier 2 tests every 5 years and report results to the Division.

NESHAP Subpart ZZZZ

40 CFR 63 Subpart ZZZZ includes requirements for reciprocating internal combustion engines (RICE). Subpart ZZZZ was amended on August 20, 2010 and now includes requirements for RICE at area sources of HAPs. There is a small emergency engine previously listed in insignificant activity that is now subject to regular maintenance and inspection requirements.

III. Discussion of Modifications Made

Source Requested Modifications

The renewal application received on April 2, 2009 and additional information received on August 3, 2010 requested the following modifications:

- Update the VOC, CO, PM and PM₁₀ annual emission limitation in accordance with most the recent calculations.
- Update the facility owner and responsible official.

The source's requested modifications were addressed as follows:

Page following cover page

- Revised the facility owner and responsible official information as requested.

Section II – Specific Permit Terms

- Updated VOC and CO limits based on LandGEM results using Division approved NMOC concentration of 956 ppmv as hexane. Since the site-specific NMOC concentration is expected to fluctuate with each Tier 2 test conducted, the

Division approved value was used to provide a buffer. The 956 ppmv as hexane value was developed through testing of several Colorado landfills. Note that the actual annual emissions will be calculated using the NMOC concentration determined by the most recent Tier 2 test.

- The particulate matter emissions were updated in accordance with calculations provided with the APEN submitted on August 3, 2010.

Other Modifications

In addition to the source requested modifications, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal. These changes are as follows:

Section I – General Activities and Summary

- Revised the language in Condition 1.4 include current conditions that are state-only enforceable.
- Updated Condition 3.1 (status of source with respect to PSD requirements) to reflect Division's current standard language and current Regulation No. 3 citations.

Section II – Specific Permit Terms

- The two points for fugitive particulate emission and gas emission were combined into one landfill point.
- The particulate matter annual limit condition was reworded to clarify that presumed compliance is a function of both waste acceptance rates and dust control practices.
- A condition was added to the permit requiring the facility to modify their permit should there be any change in design capacity of the landfill. This design capacity requirement is based on volume rather than weight and is therefore not density dependent.
- The fugitive particulate emission opacity condition was removed from the permit. These requirements are merely guidelines and are not enforceable and therefore serve little purpose in the Title V permit.
- Removed requirements from fugitive dust plan to require shutdown due to high winds. Colorado solid waste regulations require the facility not to operate in extreme winds and therefore the requirement is unnecessary for this permit.
- Removed requirement for facility to certify semi-annually compliance with the Fugitive Control Dust Plan. This is already a requirement as the facility must submit semi-annual deviation reports.
- The applicable NSPS Subpart WWW requirements were added to the permit.

- The odor requirements from Reg 2 were removed from the specific permit conditions to eliminate redundancy. This requirement is included in the General Conditions in Section IV of the permit.

(New) Emergency Diesel Generator

- There is one emergency engine previously included in the insignificant activity list that is considered insignificant under the provisions in Colorado Regulation No. 3, Part C, Sections II.E.3.nnn (emergency generators). However, under the “catch-all” provisions in Regulation No. 3, Part C, Section II.E, sources that are subject to any federal or state applicable requirement, such as National Emission Standards for Hazardous Air Pollutants (NESHAPs), may not be considered insignificant activities for operating permit purposes. EPA promulgated National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines which apply to this engine; therefore, it can no longer be considered insignificant activity. Although the unit cannot be considered insignificant activity, since the Division has not yet adopted the RICE MACT which addresses area sources, the engines are still exempt from APEN reporting and minor source construction permit requirements. The applicable requirements were included in the permit.
- Since the engine is not subject to any emission limitations, monitoring requirements, notification and reporting requirements the requirements in §§ 63.7, 63.8, 63.9 and 63.10 do not apply. In addition, since this emission units an existing unit (construction commenced prior to June 12, 2006), the requirement in § 63.5 (preconstruction review and notification requirements) do not apply. Finally, Table 8 of Subpart ZZZZ indicates that operation and maintenance requirements in 63.6(e) do not apply. Therefore, the permit will only include the prohibition and circumvention NESHAP general provisions requirements in § 63.4.

Section IV – General Permit Conditions

- Updated the general permit conditions to the current version (11/16/2010).

Appendices

- Updated the list of insignificant activity in Appendix A. Some of the equipment listed on the renewal application was portable.
- Updated Appendices B and C (Monitoring and Permit Deviation Reports and Compliance Certification Reports) to the newest versions (2/20/2007).
- EPA’s mailing address was revised in Appendix D.
- Cleared the list of modifications from Appendix F related to the previous issuance.